



E301.0493

Environmental Management

Technical Guide

INDOOR AIR QUALITY

BACKGROUND

The General Services Administration's Indoor Air Quality (IAQ) policy is directed at maintaining acceptable indoor air quality at GSA-owned facilities, leased space, and delegated facilities. The GSA IAQ program has both an on-going and a proactive component. The on-going portion calls for the facility manager to provide prompt response to complaints and, when possible, implement controls to correct problems that are discovered. The proactive portion calls for conducting IAQ assessments as part of the safety and environmental management survey program. An overview of the program logic is provided in Figures 1 and 2.

DISCUSSION

- A. In concert with tenant agencies, GSA will ensure that buildings and space assigned to agencies provide a safe and healthful work environment.
- B. GSA-owned facilities and leased space, including delegated space, will be operated in accordance with the temperature and building operating criteria contained in 41 CFR Part 101-20, of the Federal Property Management Regulations (FPMR).
- C. All GSA buildings shall be assessed for indoor air quality. Such assessments will be conducted as part of GSA's scheduled environmental management survey program.
- D. When assessments identify problems that cannot be corrected through changes in building operating procedures, more detailed studies will be undertaken. Where possible, control of contaminants will be done at the source.
- E. Implementation of the program, response to occupant complaints, and implementing corrective actions will be carried out by the appropriate field office manager. Occupant complaints shall be kept in a log (manual or computer based) and maintained at each field office.

GSA REQUIREMENTS/RECOMMENDATIONS

Indoor air quality assessments for GSA-owned, leased and delegated space must be conducted by an industrial hygienist, environmental scientist, safety engineer or other



person qualified by training and experience. Corrective actions associated with IAQ deficiencies shall be entered into the Safety and Environmental Management Information (SAFE) System unless they are abated during the initial response.

Records of all surveys, sampling results, assessments and control/abatement actions implemented in GSA-owned or leased space must be maintained in a permanent file in the appropriate field office.

If unsatisfied with GSA's resolution, tenant agencies are responsible for investigating IAQ complaints of their employees and rectifying identified problems.

I. ASSESSMENT PROCEDURES

A. SCHEDULED SAFETY AND ENVIRONMENTAL MANAGEMENT SURVEYS

All scheduled (once in 5 year) surveys should consist of the following steps:

1. An entrance and exit briefing with the field office manager.
2. A review of the building's HVAC plans, if available. This should include a review of any renovations to existing systems.
3. Review of equipment maintenance and testing records for the last 12 months.
4. Review of the building layout to identify the location of GSA-occupied spaces and the areas that service them.
5. Review of the occupant complaint log.
6. Walkthrough inspection.
7. Occupant interviews.
8. Identification of external and internal contaminant sources.
9. Check of the mechanical rooms that service the ventilation system, check of cooling towers, outside air intakes.
10. Sample for carbon dioxide on each floor. Choose the most densely populated area that is representative of office spaces in the building. Each carbon dioxide measurement must be accompanied by the following data (room # and floor, sq. footage of the area, temperature of the area, relative humidity of the area, and an air velocity reading). The best time to take this reading is early afternoon following the lunch break. In any case, the time of the carbon

dioxide measurement should be recorded. A test of the carbon dioxide concentration ambient outside air will serve as a control.

11. Check for visible mold growth and damp or wet areas.

B. UNSCHEDULED ASSESSMENTS

The format of these assessments will vary with the nature of the IAQ complaint. Carbon dioxide reading, if taken require the same information provided for scheduled surveys.

II. GSA INDICATOR LEVELS FOR INDOOR AIR CONTAMINANTS

CONTAMINANT	AREA	GSA INDICATOR LEVEL	REFERENCE
CARBON MONOXIDE	SHOPS	17.5 ppm (TWA)	50% OF OSHA TWA
CARBON MONOXIDE	OFFICES	9.0 ppm	NAAQS +
CARBON DIOXIDE	ALL	1000.0 ppm (TWA)	ASHRAE*
FORMALDEHYDE	SHOPS	0.5 ppm (TWA)	OSHA ACTION LEVEL
FORMALDEHYDE	OFFICE	0.1 ppm (TWA)	NIOSH

* ASHRAE research and consensus standard, used as an indicator of inadequate ventilation

+ NAAQS - national ambient air quality standard

LEGEND:

Indicator

level - the level that requires appropriate response action when reached

ASHRAE - American Society of Heating, Refrigeration and Air Conditioning Engineers

NIOSH - National Institute of Occupational Safety and Health

OSHA - Occupational Safety and Health Administration

ppm - parts per million

TWA - time weighted average (8-hour sample)

REFERENCES

Ventilation for Acceptable Indoor Air Quality. ASHRAE 62-1989. American Society of Heating, Refrigeration and Air Conditioning Engineers, Inc.

Building Air Quality: A Guide for Building Owners and Facility Managers. Environmental Protection Agency.

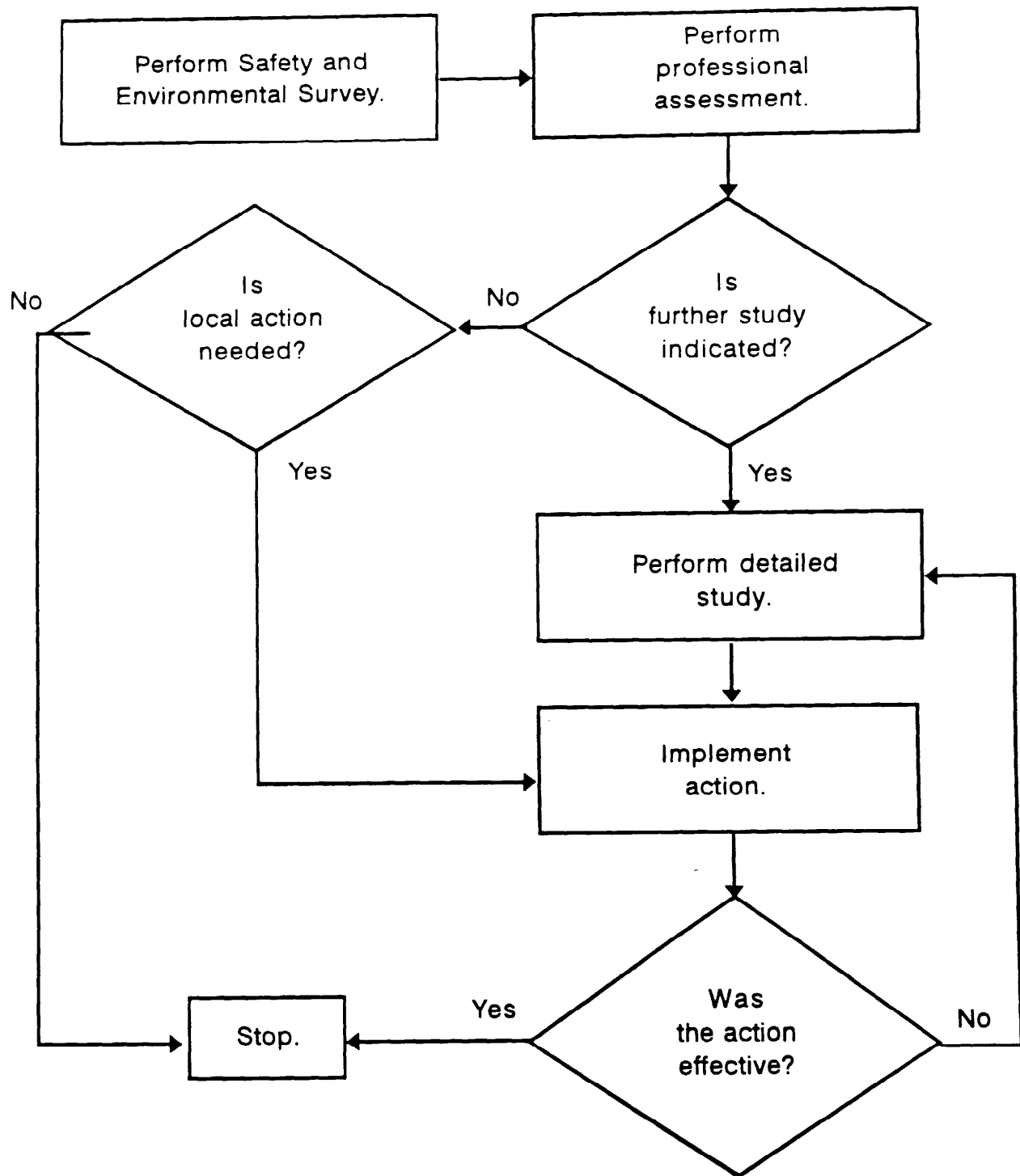


Figure 1
Indoor Air Quality Program--
Proactive Element

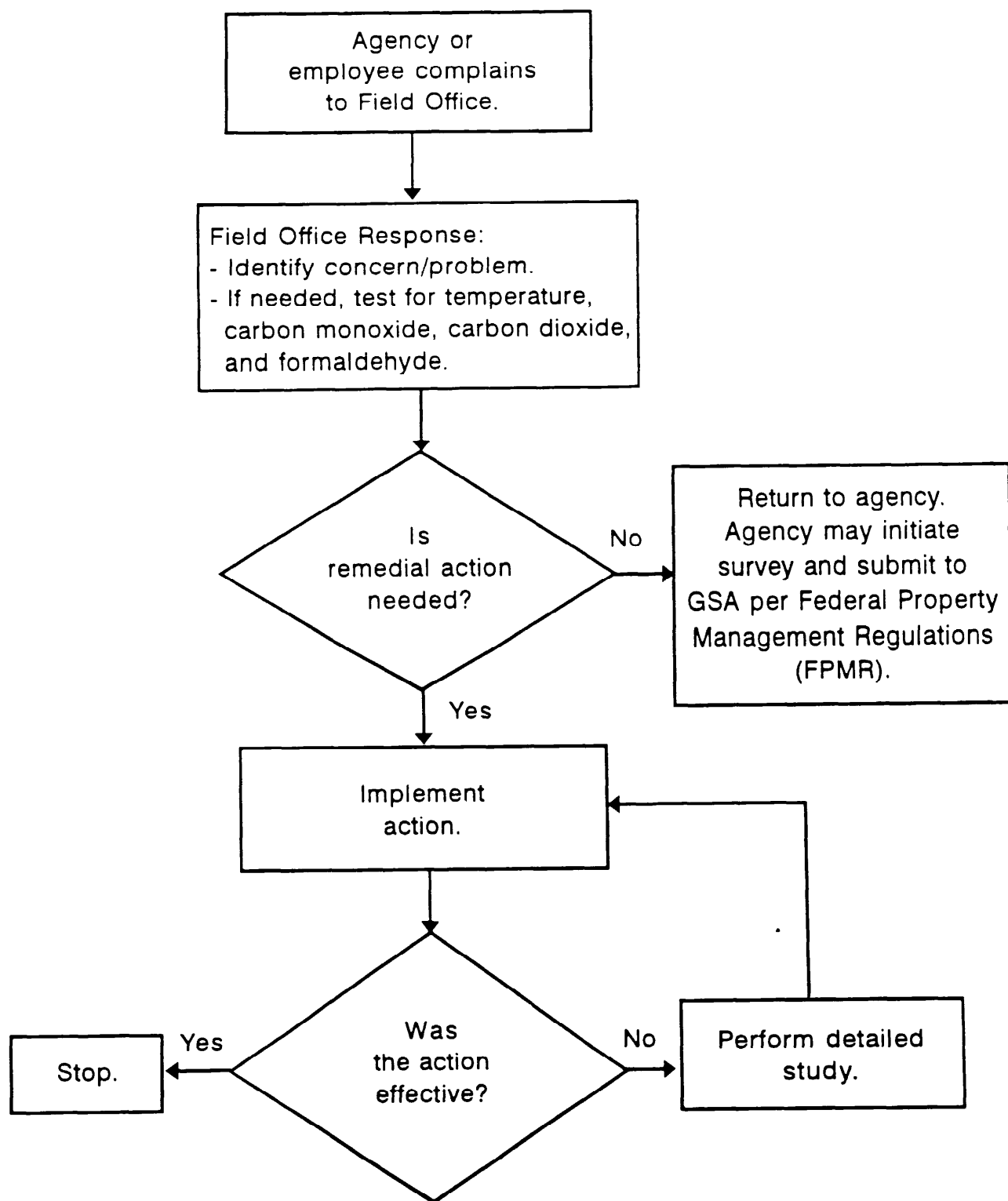


Figure 2
Indoor Air Quality Program--
Ongoing Element

GENERAL SERVICES ADMINISTRATION
Washington, DC 20405

PBS P 5800.36
May 10, 1994

GSA ORDER

SUBJECT: Real Property Management and Safety Policy Handbook

1. Purpose. This order transmits the HB, General Services Administration (GSA), Public Buildings Service (PBS), Real Property Management and Safety Policy.

2. Background. The Office of Real Property Management and Safety (PM) has developed a new policy handbook that provides updated policies for operating, maintaining, repairing and modernizing the GSA inventory of space to ensure a safe, healthful and efficient workplace environment for Federal employees and the visiting public. This handbook employs basic program policy statements with the intent that future changes, modifications, or revisions will be at a minimum. Outmoded handbooks are being replaced by applicable desk guides, training manuals, and maintenance guide cards. Until such time as these handbooks are replaced the regions should use them as a reference. Technical information, and guidance and reference to forms will be incorporated in the desk guides and/or training manuals.

3. Cancellation. The following handbooks, suspended by Instructional Letter PBS-IL-92-8, are canceled:

PBS P 5800.18B	Operation and Maintenance of Real Property
PBS P 5800.35	Energy and Water Management
PBS P 5810.2B	Custodial Management
PBS P 5815.2A	Concessions Management
PBS P 5815.3	Planning and Inspections of Cafeteria Operations
PBS P 5835.1	Elevator Operation
PBS P 5850.1B	Buildings Maintenance Management
PBS P 6800.1C	Repair and Alteration Program Management

The Instructional Letter, PBS-IL-92-8, is also canceled.


Distribution: A;B;C;D;F;G;H;I;J

Attachment

May 10, 1994

4. Labor relations obligations. Management officials responsible for putting this order into effect should maintain close coordination with the appropriate personnel office to ensure that labor relations obligations are met with respect to employees represented by a labor organization. Implementation of this order is contingent upon completion of labor relations obligations.



 KENNETH R. KIMBROUGH
Commissioner
Public Buildings Service